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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,724	11/30/2001	Rolf Bruck	E-41365	7179
24131	7590	12/17/2004	EXAMINER	
LERNER AND GREENBERG, PA P O BOX 2480 HOLLYWOOD, FL 33022-2480			DUONG, THANH P	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,724

Applicant(s)

BRUCK, ROLF

Examiner

Tom P Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/12/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4, drawn to a method of producing a honeycomb body, classified in class 264, subclass 630.
- II. Claims 5-16, drawn to a honeycomb body, classified in class 422, subclass 174.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the method of producing a honeycomb body can be done by using thin metallic sheets to form corrugated thin metal foil other than a layer with a first plastically deformable and subsequently consolidatable mass.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Laurence A. Greenberg on October 21, 2004 a provisional election was made with traverse to prosecute the invention of II, claims 5-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-4 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

Claim 6 is objected to because of the following informalities:

In claim 6, line 1, "claim 4" should be replaced with "claim 5" for proper claim dependency.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Maus et al. (5,130,208). Maus discloses a honeycomb body (Abstract), comprising: at least partially ceramic walls (Col. 6, lines 4-6) forming channels (8) through which a fluid can flow, said channels lying next to one another (Fig. 2); and at least one of said walls having a structure for influencing a throughflow of the fluid (inverted regions 4 and 5); structure is disposed at least one of longitudinally, transversely and obliquely relative to a direction of the throughflow the fluid in the channels (Fig. 1); and said structure is one of wavy and zigzag-shaped (Fig. 1).
2. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ketcham (5,519,191). Ketcham discloses a honeycomb body (Fig. 1A), comprising: channels through which a fluid can flow; a plastically consolidatable first mass (12) ; at least one second mass (13) forming a layer along a section through the honeycomb body next to said first mass; and said first mass having a property different from that of said second mass and wherein first mass is formed in layers. With respect to the recitation of "a plastically deformable and

subsequently consolidated" first mass, Ketcham does not disclose the honeycomb is made by such process; however, Ketcham discloses the honeycomb body is made of the same material as the claimed invention. Note a product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even through the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

3. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hiraishi et al. (5,588,292). Hiraishi discloses a honeycomb body (Fig. 1A), comprising: channels through which a fluid can flow; a consolidatable first mass (12) ; at least one second mass (13) forming a layer along a section through the honeycomb body next to said first mass; and said first mass having a property different from that of said second mass and wherein first mass is formed in layers. With respect to the recitation of "a plastically deformable and subsequently consolidated" first mass, Hiraishi does not disclose the honeycomb is made by such process; however, Hiraishi discloses the honeycomb body is made of the same material as the claimed invention. Note a product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even through the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

4. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Saito et al. (5,421,719). Saito

discloses a honeycomb body (Fig. 5), comprising: channels through which a fluid can flow; a consolidatable first mass (23) ; at least one second mass (24) forming a layer along a section through the honeycomb body next to said first mass; and said first mass having a property different from that of said second mass and wherein first mass is formed in layers. With respect to the recitation of "a plastically deformable and subsequently consolidated" first mass, Saito does not disclose the honeycomb is made by such process; however, Saito discloses the honeycomb body is made of the same material as the claimed invention. Note a product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even through the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maus et al. '208. Maus does not disclose the honeycomb body is made completely of ceramic material; however, it is conventional to fabricate the honeycomb body made of ceramic

and/or metallic material and it would have been obvious in view of Maus to one having ordinary skill in the art to fabricate the honeycomb body with either ceramic and/or metallic material since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham et al. '191. Ketcham does not disclose the honeycomb body is made completely of ceramic material; however, it is conventional to fabricate the honeycomb body made of ceramic and/or metallic material and it would have been obvious in view of Ketcham to one having ordinary skill in the art to fabricate the honeycomb body with either ceramic and/or metallic material since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraishi '292. Hiraishi does not disclose the honeycomb body is made completely of ceramic material; however, it is conventional to fabricate the honeycomb body made of ceramic and/or metallic material and it would have been obvious in view of Hiraishi to one having ordinary skill in the art to fabricate the honeycomb body with either ceramic and/or metallic material since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

8. Claims 5-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraishi '292 in view of Maus et al. (5,474, 746) . Regarding claims 5, 7, and 14, Hiraishi discloses ceramic honeycomb body (12), comprising: ceramic walls (Fig. 2C and Col. 3, lines 14-18) forming channels (inner walls) through which a fluid can flow, said channels lying next to one another (Fig. 1A); and and an electrically conductive mass (13) integrated into one of said ceramic walls (12). Hiraishi fails to disclose at least one measuring sensor. Maus '746 teaches at least one temperature sensor and/or heat conductor 17 (Abstract) extending between the honeycomb corrugated layers 21 and 22 (Fig. 2) to measure the wall temperature of the catalytic converter (Col. 3, lines 55-60). Thus, it would have been obvious in view of Maus '746 to one having ordinary skill in the art to modify the honeycomb body of Hiraishi with a temperature sensor and/or measuring conductor as taught by Maus '746 in order to measure the wall temperature of the catalytic converter. Regarding claim 6, the combination of Hiraishi in view of Maus '746 provide a honeycomb body with at least one of said measuring sensor and said electrically conductive mass surrounded completely by ceramic.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraishi et al. '292 in view of Ohashi et al. (5,514, 347). Hiraishi discloses the claimed invention except an orifice formed therein from one of said channels to another of said channels as a passage for the fluid. Ohashi teaches the orifice (through holes 33) are formed onto the partition walls 32a and 32b to create a turbulence flow in a stream of fluid (Col. 6, lines 40-49) to improve mass and heat transfer (Col. 5, lines 1-9). Thus, it

would have been obvious in view of Ohashi to one having ordinary skill in the art to modify the honeycomb body of Hiraishi with the orifice as taught by Ohashi in order to create turbulent flow for the fluid, which improve mass and heat transfer.

10. Claims 5-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham et al. '191 in view of Maus et al. '746. Regarding claims 5, 7, and 14, Ketcham discloses ceramic honeycomb body (Fig. 3), comprising: ceramic walls (24) forming channels (Fig. 4) through which a fluid can flow, said channels lying next to one another (Fig. 1A); and an electrically conductive mass (22) integrated into one of said ceramic walls (24). Ketcham '191 fails to disclose at least one measuring sensor. Maus '746 teaches at least one temperature sensor and/or heat conductor 17 (Abstract) extending between the honeycomb corrugated layers 21 and 22 (Fig. 2) to measure the wall temperature of the catalytic converter (Col. 3, lines 55-60). Thus, it would have been obvious in view of Maus '746 to one having ordinary skill in the art to modify the honeycomb body of Hiraishi with a temperature sensor and/or measuring conductor as taught by Maus '746 in order to measure the wall temperature of the catalytic converter. Regarding claim 6, the combination of Ketcham '191 in view of Maus '746 provide a honeycomb body with at least one of said measuring sensor and said electrically conductive mass surrounded completely by ceramic. Regarding claim 14, the applied references fail to disclose the honeycomb body is made completely of ceramic material; however, it is conventional to fabricate the honeycomb body made of ceramic and/or metallic material and it would have been obvious in view of the applied references to

one having ordinary skill in the art to fabricate the honeycomb body with either ceramic and/or metallic material since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

11. Claims 8-10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham et al. '191 in view of Maus et al. '208. Ketcham '191 discloses a honeycomb body (Abstract), comprising: at least partially ceramic walls (24) forming channels (Fig. 4) through which a fluid can flow, said channels lying next to one another (Fig. 4). Ketcham '191 fails to disclose at least one of said walls having a structure for influencing a throughflow of the fluid; said structure is disposed at least one of longitudinally, transversely and obliquely relative to a direction of the throughflow the fluid in the channels (Figs. 1); and said structure is one of wavy and zigzag-shaped (Fig. 1). Maus teaches walls having structure (inverted regions 4 and 5) which is disposed at least one of longitudinally, transversely and obliquely relative to a direction of the throughflow the fluid in the channels (Figs. 1-3); and said structure is one of wavy and zigzag-shaped (Fig. 1-3). Incorporating such structure (inverted regions) in the honeycomb channels provides a higher catalytic conversion rate than conventional honeycomb body (Col. 2, lines 54-59). Thus, it would have been obvious in view of Maus '208 to one having ordinary skill in the art to modify the honeycomb body of Ketcham with the structure as taught by Maus '208 in order to achieve a higher catalytic conversion rate in the honeycomb body. Regarding claim 15, the applied references fail to disclose the honeycomb body is made completely of ceramic material; however, it is

conventional to fabricate the honeycomb body made of ceramic and/or metallic material and it would have been obvious in view of the applied references to one having ordinary skill in the art to fabricate the honeycomb body with either ceramic and/or metallic material since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham et al. '191 in view of Ohashi et al. '347. Ketcham discloses the claimed invention except an orifice formed therein from one of said channels to another of said channels as a passage for the fluid. Ohashi teaches the orifice (through holes 33) are formed onto the partition walls 32a and 32b to create a turbulence flow in a stream of fluid (Col. 6, lines 40-49) to improve mass and heat transfer (Col. 5, lines 1-9). Thus, it would have been obvious in view of Ohashi to one having ordinary skill in the art to modify the honeycomb body of Ketcham with the orifice as taught by Ohashi in order to create turbulent flow for the fluid, which improve mass and heat transfer.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
December 9, 2004

TD


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